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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,778	05/23/2001	George A. Soli	41836/JWP/I267	2336
23363	7590	01/07/2005	EXAMINER	
CHRISTIE, PARKER & HALE, LLP PO BOX 7068 PASADENA, CA 91109-7068			ALSOMIRI, ISAM A	
			ART UNIT	PAPER NUMBER
			3662	

DATE MAILED: 01/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/863,778

Applicant(s)

SOLI, GEORGE A.

Examiner

Isam A Alsomiri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13 and 17 is/are rejected.
- 7) ☒ Claim(s) 12, 14-16 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

The amendment filed December 22, 2004 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: In claim 1, the limitations "to detect variations in the vector group velocity resulting from changes in the orientation of the device" are not described in the original disclosure.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11, 13, and 17 are rejected under 35 U.S.C. 103(a) as obvious over Chiao.

Re claims 1, 2, 13, and 17, given that "superluminal" group velocity measurements will be more clearly supported in the original disclosure, the basic logical time comparison of a wave

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packet traveling over two paths, one through a tunnel barrier medium as described by Chiao in at least Fig. 2 of the reference, remains relevant. Any variation claimed on the apparatus for measuring the relative time differences as presently claimed would have been obvious over the general concepts of Chiao. To the extent that a "controller" is not specifically identified as such in Chiao, a controller would have been obvious if not inherent, since there must be control of the reference signal relative to the measured tunneling signal. While claims 6-10 relate to RF measurements, no clear distinction has been drawn over the principles at the RF wavelength that would not have been obvious. Any naturally occurring doppler shift must also effect the Chiao measurement inherently as claimed or at least would have been obvious as presented. Also, it's inherent that Chiao's system measures the oscillation of the group velocity over a specified period of time (during transmission), and determines the group velocity maximum, minimum, average, etc.

Furthermore, Chiao's system inherently teaches the claimed analyzer with sufficient resolution, even if Chiao's system does not teach the claimed resolution, it would have been obvious to modify Chiao's system to use the best analyzer with the best resolution available at the time the invention was made for more accurate measurements. Also, "changes in the orientation of the device" can be anything, not necessarily earth position with respect to the universe, it can be for example (noises, vibration, movement relative to the ground), and many compensation methods are well known for all these types of interferences.

Note that Claim 17 does not specifically relate to anymore than reorientation of the apparatus in a room or building, well within the scope of Chiao.

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Re claim 6, it's inherent the transmitter is in communication with the transmission antenna.

Re claim 11, it's inherent that Chiao's system measures the superluminal group velocity which happens during the centroid time (peak).

Re claims 7 and 9-10, Chiao is silent about using a radio amplifier and using a five-element folded-dipole Yagi antenna, however, these modifications are well known if not already inherent within Chiao's system. It would have been obvious to modify Chiao's system to include the Yagi antenna and the amplifier for better detection of the signals which gives more accurate results.

Re claim 8, Chiao is silent about have a wavelength selector, however, having a wavelength selector is well known, and it would have been obvious to include a wavelength selector for noise suppression or elimination in the measurements.

Claims 3-5 are rejected under 35 U.S.C. 103(a) as obvious over Chiao in view of Chueng.

Re claim 3-4, Chiao is silent about having barriers as tank holding water. However, superluminal group velocity measurements are well known, and having the claimed tank barrier is also well known. Cheung teaches quantum tunneling, and a tank barrier penetration (see page 3 section b). It would have been obvious to use a tank as a barrier for different observation, which can lead to different results (faster or slower penetration).

Re claim 5, Chiao is silent about adjusting the barrier length. However, adjusting the barrier length is also well known. Cheung teaches adjusting the barrier length (see page 3 section a). It would have been obvious to adjust the barrier length to measure different velocities.

Allowable Subject Matter

Claims 12, 14-16, and 18 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed October 4, 2004 have been fully considered but they are not persuasive. Regarding claim 1, Applicant argues "Chiao reference is insufficiently precise to measure variation in the group velocity associated with changes of orientation of the instrument (be they due to rotation of the earth or due to physically moving the instrument with respect to the earth)". However, Chiao's system does provide the claimed analyzer with the sufficient resolution (see rejection above), as explained above even if Chiao's analyzer is not sufficient, it would be obvious to replace it with the best analyzer available (the resolution of the analyzer is not the applicant's invention) for better measurements. Also, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "be they due to rotation of the earth or due to physically moving the instrument with respect to the earth") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the

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specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isam A Alsomiri whose telephone number is 703-305-5702. The examiner can normally be reached on Monday-Thursday and every other Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H Tarcza can be reached on 703-306-4171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

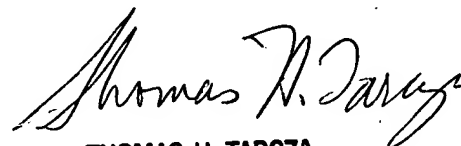
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Isam Alsomiri



December 22, 2004



THOMAS H. TARCZA
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